as expressing deliberation! In point of fact, only two out of the ten selected examples of the deliberative really belong under this head.

I should be sorry, however, to close my review by taking exceptions, and wish rather to insist that the book stands for a sound tendency, and that nothing else so detailed or so trusty yet exists.

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The Distribution and Function of Mental Imagery. By GEORGE HERBERT BETTS. New York: Teachers College, Columbia University, 1909. Pp. 99.

This book, presumably a Doctor's thesis, begins by investigating with the questionnaire method the capacity to obtain images in the principal departments of sense. The questionnaire method used is similar to Galton's but more searching and extended. The subjects were students of Cornell College, Iowa, extension classes of Teachers College, New York, and eighteen trained psychologists. Vision was found to be no better than the other senses. Smell and taste, usually thought to be much poorer than the others, were found to have as vivid imagery as vision. In general the various kinds were found to be much more evenly distributed than has been commonly thought.

The second and main part of the book has to do with the occurrence and use of imagery when the purpose is to think on some topic. The author disregards all enunciatory images because of the difficulty of discriminating between them and actual sensations. This is unfortunate, because the book turns out to be an argument in favor of imageless thought and the purely incidental character of much of our imagery. An enunciatory account is necessary to the proof. In thinking the opposites of ten words one-half of the 500 responses were accompanied by no images (except possibly enunciatory), and one-third were accompanied by images which came too late to have been instrumental in suggesting the correct word. When the task was to image for ten seconds what would be seen in the bed of the Atlantic Ocean were the water to disappear, 27 per cent. of the responses were not accompanied by images and in about 25 per cent. the images came too late to have been a cause. There were two other tests of this character, one on auditory imagery and one on gustatory, with similar results. Students were asked whether in reading their favorite pieces of literature they had images (and if so, of what kinds and how many), or whether they only felt or knew or understood the meaning of the piece. The results showed in general, according to the author, that a very large part of our thinking is either devoid of imagery or accompanied by imagery which is only incidental. In the literature test a great deal of imagery was shown to accompany the reading of the literature, but the images played only a small part in the appreciation, the mind loving to dwell on the meaning, feeling, etc.

The results, so far as they concern imageless thought and the incidental character of images, are not convincing to the reviewer. Only trained psychologists (for example graduate students in psychology) should have been used as subjects, and at least an attempt should have been made to take account of *all* the imagery which occurred. If it is easy, as the author says, to detect

the mere *presence* of imagery, why are psychologists divided on the question of the existence of imageless thought? In some cases the author decides whether the images were essential and relevant or incidental by looking over a list of images written by the subject. The subjects alone can determine this. Many an image would look irrelevant to an outsider which was full of meaning, quite decidedly pertinent, to the thinker who knew all its connections. In the literature test the author asks the subjects whether it is the images or the meaning that they love to dwell upon, and concludes, because they say the latter, that the images are incidental. Would they have had the meaning without the images? If, as seems probable, meaning consists of images (and percepts) in relation, and if the termini of the relations are subtracted, the remainder seems rather empty. And on this supposition are the images, etc., incidental, even when we are attending mainly to the relations?

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Education for Efficiency. By E. DAVENPORT. Boston: D. C. Heath & Co., 1909. Pp. 200. $1.00.

The title of the book gives little idea of its contents. The book is a plea for the combination of industrial education with that of the present high-school system, and a discussion of the development of agriculture including an outline for a four-years' course in the high school. The argument may be summarized as follows: "American education aims to be universal education," which means that it must serve all the people in their needs for everyday life; that it must educate for service and efficiency through vocational studies. In working out the problem of industrial education, "which arises as one of the demands of the masses of men for better life and opportunity," it is of utmost importance to prevent class distinction along vocational lines. As the necessities of life are obtained only through the interdependence of these activities, so industrial education cannot be considered by itself alone. The great opportunity of the secondary schools in America today is the combining and interweaving of the industrial and cultural in education as exemplified in state universities. If industrial education is not merged with the present high-school system independent schools will be established, where the aims and tendencies will be largely industrial and commercial and where the greater number will receive their education. Thus will our people be divided into two classes, inevitably drifting farther and farther apart, and we shall no longer be a homogeneous people.

Fortunately many schools have grafted on commercial and industrial courses. These courses should be so planned that those who cannot complete the work may find congenial surroundings and profitable employment when they leave school. More depends upon what we do now than can depend upon what we think or try to do twenty-five years hence.

The aims and purposes of agricultural education are primarily the promotion of public safety in the matter of racial food supply, which before the end of the century will be the largest single issue brought about by increased population.